

Claim Amendments

1. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of one multi-conductor cable to the conductors of a second multi-conductor cable, comprising:

at least two multi-conductor cables, each cable having a plurality of at least partially-exposed conductors, with the exposed conductors of two of the cables in proximity to one another, at least one such cable being a multi-axial cable comprising at least two spaced coaxial conductors;

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the exposed conductors of both of the cables that are in proximity to one another; and

means mechanical structure that holds at least the multi-axial cable and for compressing the ACE, to provide electrical signal paths between the conductors of the cables that are in proximity to one another through the ACE.

2. (original) The electrical connector of claim 1 in which at least one cable is a ribbon cable.

3. (previously presented) The electrical connector of claim 2, further comprising a paddle board having conductors that are directly connected to the conductors of the ribbon cable, with the ACE layer against the conductors of paddle board.

4. (currently amended) The electrical connector of claim 3 in which two~~both~~ cables are ribbon cables.

5. (currently amended) The electrical connector of claim 17[[4]], further comprising a second paddle board having conductors that are directly connected to the conductors of the second~~each of the~~ ribbon cables, with the ACE layer against the conductors of both paddle boards.

6. (original) The electrical connector of claim 1 in which at least one cable is a flex cable.
7. (currently amended) The electrical connector of claim 7 in which ~~two~~both cables are flex cables.
8. (previously presented) The electrical connector of claim 7 in which the conductors of both flex cables are on the surfaces of the cables, and terminate in conductive pads that face one another in the connector, the ACE lying directly against the pads of both cables.
9. (currently amended) The electrical connector of claim 1 in which ~~two~~both cables are multi-axial cables each comprising at least two spaced coaxial conductors.
10. (currently amended) The electrical connector of claim 9 in which the ACE lies directly against the conductors of both multi-axial cables.
11. (currently amended) The electrical connector of claim 9 further comprising printed circuit boards with conductors directly connected to the conductors of each of the multi-axial cables, with the ACE layer against the conductors of both boards.
12. (currently amended) The electrical connector of claim 10 in which the mechanical structure means for compressing the ACE comprises a mounting sleeves coupled to both at least one multi-axial cables.
13. (currently amended) The electrical connector of claim 12 in which the mechanical structure means for compressing further comprises a clamp assembly coupled to the mounting sleeves.
14. (currently amended) The electrical connector of claim 12 in which the mounting sleeves ~~are~~is made by potting the ends of the at least one multi-axial cables in a settable medium.

15. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of a ribbon cable to the conductors of a second electrical device, comprising:

a multi-conductor ribbon cable having a plurality of partially-exposed conductors;

a paddle board having conductors that are directly connected to the conductors of the ribbon cable;

a second electrical device having a plurality of exposed conductors;

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the exposed conductors of both the ~~cable~~paddle board and the second electrical device; and

means for compressing the ACE, to provide electrical signal paths between the conductors of the cable and the conductors of the second electrical device through paddle board and the ACE.

16. (original) The electrical connector of claim 15 in which the second electrical device is a printed circuit board (PCB).

17. (original) The electrical connector of claim 16 in which the second electrical device is a second ribbon cable.

18. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of two~~a~~ flex cables ~~to the conductors of a second electrical device,~~ comprising:

two~~a~~ flex cables, each having a plurality of exposed conductors;

~~a second electrical device having a plurality of exposed conductors;~~

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the conductors of both of the flex cables ~~and the second electrical device;~~ and

means for compressing the ACE, to provide electrical signal paths between the
conductors of the cables and ~~the conductors of the second electrical device~~ through the ACE.

19-20. (canceled)